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ORIGINAL ARTICLES

SUBCONJUNCTIVAL INJECTIONS IN EYE INJURIES.*

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This paper has been written to bring to your attention one definite remedy for, or plan of treating, eye injuries.

I shall present no series of cases treated by me, as statistics are always dry, and can be made to prove anything, although I could easily give you a long list of all varieties of eye injuries and serious eye diseases that have been treated by this method with satisfactory results. I do not wish to be pedagogic or dogmatic in my claims, and yet I mean to be positive in my statements in regard to this remedy, or mode of treatment, and you will have to rely on my statements until you have tried out the method in your own hands.

To come to the point at once I will state that in all eye injuries of a serious nature, which have resulted in, or may result in, an infectious or inflammatory condition of the eye, internally or externally, as a routine method I use subconjunctival injections. The injection usually consists of 30 to 60 minimums of a 1-3000 solution of cyanide of mercury, with which is combined a few drops of a 1 per cent acoin solution, and at times ⅛ gr. morphia and ⅛ gr. dionin; all these ingredients, except the cyanide of mercury solution, are used to lessen the rather severe pain which always follows the injection.

The following is my usual formula for the injection, which may be modified according to age or circumstances:

Sol. hydrarg. cyanide 1-3000, min. 30 to 60.
Sol. acoin 1 per cent, min. 3.
Sol. dionin 5 per cent, min. 2.
Morphia sulp. gr. ⅛.

I usually boil the solution a minute or two immediately before using. The technique of giving the injection is very simple. The conjunctiva of the injured eye is thoroughly cocainized and washed out with a 1-5000 cyanide of mercury solution. The upper lid may be retracted, either with a retractor, held by an assistant, or with the finger pressing backward over the eyebrow, the patient being told to look down all the while; then with fine forceps the conjunctiva is seized, as far from the cornea as possible, the hypodermic needle inserted just under the conjunctiva, and not penetrating Tenon's capsule, and the injection slowly made. It goes without saying that the syringe must be thoroughly sterilized before the injection is begun. The conjunctiva will be raised and have the appearance of a large bleb. The lids may be closed and gently massaged for a few moments.

The entire operation may be performed without any instrument save the hypodermic syringe, and without an assistant, if necessary, and should be entirely painless during, and for a short while after, the injection; but after a short time the pain begins and increases for some hours, and in most cases is rather severe, and will continue from two to six hours. After it subsides there will be no more pain in the eye, either from the original trouble, or from the injection. It is my rule to give the patient three or four aspirin tablets, to be taken at one-hour intervals, and if the pain is particularly severe, a ¼ gr. codein. The pain and reaction varies materially with the strength and quantity of the injection. If the injury, infection or inflammatory condition is severe and urgent and we wish to produce a very pronounced reaction, the injection must be strong and large

*Read before the Second Annual Meeting of The Florida Railway Surgeons' Association, at Pensacola, May 9, 1921.

in quantity. The reaction will reach its maximum in about twelve hours, and the œdema and inflammation of the conjunctiva and lids and the surrounding tissue will last from one to three weeks, but this is exactly what we wish to accomplish, as this is sure evidence that the injection is accomplishing its purpose.

As to the manner by which the injection produces its beneficial results I am unable to state positively. In my opinion the principal cause of the beneficial results is the intense reaction produced. This causes an enormous flow of phogocytic and corrective lymph containing antibodies to the site of the injury. There is, also, produced an enormous increase in the size and secretion of the ciliary and lymphatic vessels. This lymph is nature's antiseptic to the wound.

It is a well-known fact that all penetrating wounds to the eye are extremely liable to be infected, as the tissue of the eye precludes the possibility of strong germicides being used.

The enormous swelling and œdema of the conjunctiva generally closes the mouth of the wound as by a sliding flap of conjuctiva. The germicidal effect of the solution itself probably plays considerable part in the beneficial results, but I cannot believe it plays the major role in the results obtained, as other solutions of less germicidal nature produce practically the same results. I have, however, found the cyanide solution to serve my purpose so well that I use it almost exclusively.

This remedy may be used in any and all eye injuries, which are, or may become serious, either in incised, contused or lacerated wounds. It is especially valuable in deep, penetrating wounds, which cannot be cleansed and are liable to become infectious in nature. It will surely cut short any inflammatory process that may be present, if used in sufficient quantity and strength. Generally one injection of massive size and strength, given early, will be sufficient, but they may be repeated as soon as the reaction has subsided somewhat, if the diseased process has not been entirely arrested. Of course atropine, dionin and other local and systemic remedies should be used in conjunction with the injection; however, they are not to be compared with the subconjunctival injection in promptness in checking the inflammatory or infectious process and healing the wound. The eye should be thoroughly washed out each day for about a week, atropine and dionin instilled twice daily after the first few days, or after the reaction has somewhat subsided.

Do not be alarmed at the violence of the reaction. The conjunctiva may be intensely chemosed, the lids so œdematous that they cannot be opened for the first day or two, and the swelling may extend down the side of the face. You must warn your patient of just what to expect in the way of pain and reaction, or he may think he is "ruined for life"—tell them that the more it hurts and the worse the eye looks, the more good it will do, and they will bear the pain and discomfort with more fortitude.

Eyes that would otherwise have to be enucleated, or eyes that would inevitably be blind can be saved by this method, and retain more or less useful vision. As railway surgeons, we should always bear in mind the probability of damage being sought by the patient, and do all in our power to minimize the injury. An eye saved, though the sight is entirely lost, is considered by the patient and the public as not nearly so serious as if the eyeball were removed, and some vision, even though of not a very useful character, is much better than a totally blind eye.

Permit me to say in closing that I use this injection almost daily in my practice, not only in injuries, but in all cases of inflammation of the external or internal eye—iriocyclitis, optic neuritis, corneal ulcers, interstitial keratitis, retinitis, and to prevent symphathetic ophthalmia. Indeed, its only positive contraindication is acute glaucoma, where it may temporarily cause an increase in tension.

Not many oculists use the injection, and it is with a view to its more general use that this paper has been written. In my opinion it is the greatest single remedy we have in eye

troubles, with the possible exception of atropine. I have never once failed in promptly arresting any case of severe inflammation that I have treated in this manner. I can only say that you will never know the really marvelous results of this method of treating eye injuries until you have given it a personal trial.

Hoping that you will put it to the test in your next case of serious eye injury, assuring you that you will not be disappointed in the result, thanking you for the courtesy of your attention to this rather crude presentation of a tremendously important subject, and hoping for a full discussion of this paper, I thank you.

THE IMPORTANCE OF CONSERVING VITAL POWERS IN RENDERING FIRST AID.*

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The fact that minor injuries sometimes produce serious results compels us to consider the vital reserve force in all injured patients.

In healthy, vigorous persons an extensive injury may give but very little trouble, while seemingly insignificant injuries in the anemic patient may endanger life.

I make it a part of the first aid to note the general appearance, the eyes, skin and tongue. If the tongue is coated, he is given medicine to clean out the alimentary tract. If the tongue is red showing hyperacidity he is also given sodium bicarbonate. If there is anemia he is given Blaud's mass with cascara, nux, and arsenic, or some other appropriate tonic.

The patient as a whole is considered and assistance is given wherever needed.

But it is in the serious injuries when that "vapor that appeareth for a very little while" *almost* "vanisheth away," as a result of some visible injury or shock, that the surgeon's judgment is called upon to "stand in the gap." The first impulse of the bystander is to rush the patient to the nearest hospital. And they honestly believe that they are doing everything possible to save life, while in reality it may be just the finishing touch needed to extinguish life, nature having had all the rushing she can stand.

When called on the phone to a serious accident I tell them, "Do not try to move the patient until I get there."

In severe brain injuries, if the patient can lie absolutely quiet (and it takes good doses of morphine to keep him quiet), apply ice to the head, and hot bottles to the body and limbs until the clots are well formed. Many apparently hopeless cases will recover. In this class of injuries the initial dose of epsom salts should be considered a part of first aid. It not only eliminates the undigested food, which would otherwise decompose as digestion stops in severe injuries, but it assists in keeping the blood pressure down.

The rolling and turning necessary in changing clothes before the clots are well formed is a hazardous risk. The soiled clothes look bad, but a patient ready for the undertaker looks worse.

Abdominal injuries also need time for the morphine to lock up before moving the patient.

One case in 1914, shot 1½ inches above and to the right of the umbilicus by a S. & W. 38, had thirteen punctures of the intestines. He was seventeen miles from the hospital. By the hypodermic use of morphine and atropine and adrenalin in one and one-half hours he had sufficiently recovered from the shock to be carefully moved to the hospital where Dr. J. G. DuPuis repaired the injuries and the patient recovered.

Had I yielded to the clamor of the citizens to rush off immediately for the hospital he would have landed at the undertakers.

If we could have in civil life a portable outfit to send to wrecks to prevent the necessity of moving the badly injured until they recover from the first shock it would reduce the mortality. And if the ambulances could take a man of experience and judgment to

*Read before the Second Annual Meeting of The Florida Railway Surgeons' Association, at Pensacola, May 9, 1921.

the severely injured instead of a young intern who does not yet know how to conserve vitality, fewer cases would expire on reaching the hospital.

NURSING STANDARDS.*

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On every side and from every source we hear of the problems of hospitals and training schools. In fact so much is being said, anyone who studies the subject cannot fail to be deeply concerned not only with our problems but with the fact that some radical modifications will have to be made in our training schools if we are going to live up to the rapidly advancing nursing standards of the day.

What, then, is the matter with our training schools? We all state in our circulars, and presumably we all believe, that splendid and unusual opportunities are offered in the field of nursing to the intelligent cultured woman who wishes to prepare herself for a life work which is well worth while from the standpoint of personal satisfaction and service. Why is it then that training schools offering the opportunity of preparation for such work, with little or no personal expense to the student, are not filled to overflowing with the very best type of woman that the country can produce? On the contrary, from all sides we hear of the constantly decreasing number of desirable and suitable applicants.

Another grave cause for concern and anxiety to those vitally interested in nursing education is the criticism that after three years, supposedly spent in actual preparation and training for such work, the graduates of our schools as a whole are not adequately prepared to go ahead with the important work which awaits them. Especially is this true, we are told, in Public Health work, or work along executive or administrative lines.

Conditions throughout the entire world have changed during the past few years as a result of the world's upheaval during the recent war. Nursing needs to keep pace with the demands of the day, although to many of us actively engaged in training-school work it seems as if the necessary changes were never more difficult to accomplish than at the present.

One of our greatest difficulties is that produced by the shortage of applicants. In all parts of the country hospital beds are rapidly increasing in numbers; new hospitals are being built and opened for the use of the public, each imbued with the definite desire to open its own school of nursing; and within established hospitals each year more actual nursing service is being required in all departments, not only in the hospital proper but also in its special departments, such as the dispensary, social service, X-ray, physical therapy, laboratory, etc.

Any program of expansion, development and progress necessitates a marked increase in the annual expenditures of the hospital, and, unfortunately, hospitals are already facing greatly increased financial burdens without any immediate prospect of proportionate increase in their income.

Because of the fact that the work of the hospital is humanitarian as well as educational in character, the physical welfare and nursing of sick patients cannot be sacrificed, not even to the education of the nurse; on the other hand, neither can the education and physical fitness of our young student nurses be sacrificed to the needs of the hospital. Some of the most serious problems, then, that seem to be demanding solution are:

1. What immediate steps shall be taken to improve conditions and methods of training so that our schools will attract student nurses of the right type in sufficient numbers?

2. How shall the hospital give adequate nursing care to its patients and at the same time make provision for the proper education of its student nurses?

3. How can we reorganize the training school to meet the standard of today and who shall decide what form of reorganization is best?

*Read before the Florida Midland Medical Society, at Orlando, October, 1920.

4. How can sufficient funds be secured for such a purpose?

Answering question number one, as to what steps should be taken to improve conditions and methods of training in order to attract student nurses of the right type in sufficient numbers, first and most important is the shortening of the long hours of duty of the student nurse. Fortunately, hospitals throughout the country are practically unanimous in recognizing the justice and desirability of this change, and in most cases they are working toward this end with the hope of solving at least this problem in the near future.

Changes should be made in our methods so that a three-year course of training shall be more distinctly educational and sufficiently broad in scope to prepare nurses to enter the executive hospital field or the field of Public Health Nursing. We are doubtless all agreed that our student nurses should not find it necessary to spend more than three years in acquiring such training. Many of us are asking ourselves whether, in order to give a complete training and also to meet the argument so frequently advanced, that nurses, like medical students, should all be trained along the same general lines; it might not be desirable to institute a two-year and three- or four-month course of training along carefully arranged general lines; this course to be taken by every student entering the school, with the regular school diploma awarded at the end of the course, provision being made for immediate continuation of the work in a highly specialized postgraduate course of elective work covering an eight-month period for students desiring to prepare themselves for special work. Students intending to do private duty nursing might not desire to take this extra course; undoubtedly all others would.

Should this change be made we would not be doing what many are attempting to do today, when they give from three to six months' specialized work to every student in the school regardless of her ability or fitness for such service or of her expectation or desire to ever make use of such training.

It is a question whether hospitals might not really profit rather than lose by this apparent reduction of time, as it is a certainty that the more ambitious and desirable type of student would generally elect to continue the last eight months' work in order to secure the extra training and the postgraduate certificate which would carry considerable prestige with it.

We must face the fact that large numbers of young women entering our schools today are doing so for the sole purpose of being prepared for Social Welfare or Public Health work, and it is as unjust to deprive them of the opportunity of preparation for this work as it would be to deprive them of the opportunity of obstetrical or operating-room training. The plan of establishing schools on this general basis also suggests the idea that hospitals with special facilities and equipment for postgraduate work of value might afford the opportunity of affiliation with smaller carefully selected schools where such work is not possible. This would afford students from smaller schools the greatly needed opportunity of preparation for special elective work.

The idea of introducing a shortened period of training in addition to an eight-hour day seems a startling one at first sight, but might not such changes help us to solve the problem of the shortage of applicants, and at the same time make it possible to prepare a larger number of nurses for the needs of the public in a shorter period of time? It would certainly help us to maintain standards which promise to be utterly demolished if a general course of training of one year or less for nurses, attendants, or any other group, becomes an established practice without adequate safeguards as to licensing or supervision of training. If the nursing profession does not boldly face the many complex nursing problems which today confront us and if we do not point out logical and satisfactory methods by which such problems may be solved, we may rest assured that others can and will undertake this piece of work for us.

Hospitals and training schools of the country, moreover, should spare no effort to endorse and participate in the work of publicity concerning nursing education, the necessity for which is being so strongly agitated through the national nursing organizations.

This publicity campaign, if successful, should yield many interesting and significant facts and serve as a basis for many recommendations of greatly needed changes and improvements.

Our second problem is also of a most serious character. How shall hospitals be enabled to give adequate care to their sick patients and at the same time give to their student nurses a suitable and satisfactory nursing education and shorter hours?

The answer may be brief. First, by employing more graduate nurses on the permanent staff of the hospital, especially on the night force. Second, by the use of paid helpers or hospital maids, at least one of whom could be used to good advantage on every large hospital ward. Third, and I purposely place this suggestion last, by the use of graduate attendants who have been trained in institutions registered for that purpose and controlled by State law. Until legislation for the control and regulation of this group has been enacted, training schools and hospitals will find the use of attendants a dangerous procedure, and one apt to work out more harm than good ultimately. Any attempt to train attendants and student nurses in the same institution must be regarded not only as undesirable but as apt to result in danger and disaster to the training school itself.

Problem three. The newly organized American Conference on Hospital Service which has come into existence so recently, affords an opportunity for the development of a comprehensive program for the nation, through the combined thought and effort of medical, lay, and nursing groups, each of whom has hitherto considered the problem independently.

It is but natural that nurses in dealing with this problem should emphasize nursing standards, the details of nursing education and the professional status of nurses. And we believe that the control of nursing education and the protection of the rights of the nurse, both as undergraduate and as graduate, are of vital concern to the public.

The physician's point of view has been somewhat different. At the bedside the nurse is the physician's assistant and he is therefore interested primarily in obtaining an unlimited supply of faithful assistants ready to perform such tasks as may be assigned to them. With the demand for the services of nurses in fields apart from bedside nursing, many physicians have not been particularly concerned. Taking what they evidently believed to be their patients' viewpoint, they have generally looked askance at any tendency toward the raising of nursing standards which was likely to be accomplished by an increase in the cost of nursing service. With but few exceptions, physicians have concerned themselves but little with methods of teaching and have had little sympathy with legislation designed to protect the nurse as well as the public from imposition and fraud. The physician has evidently felt that he was fully qualified to protect his patients by the exercise of his personal judgment in the selection of nurses and bedside attendants; that legislative standards and the activities of nursing organizations which have prompted protective legislation were more or less superfluous.

Also hospital trustees have been torn between conflicting desires. They have felt it to be their duty to train large numbers of nurses in order to satisfy the public demand; and in seeking to enroll large numbers of probationers in the hospital schools they have undoubtedly been influenced also by the hospital's own nursing needs. Compelled by financial necessity, they have at times opposed what nurses have regarded as just demands for improvement in working conditions; and, without claiming to be expert in matters of

nursing education, they have nevertheless demanded that they be recognized as the responsible managers of training schools.

And so, during the past decade, there have been two and sometimes three forces arrayed against each other in the struggle to readjust and improve nursing standards and service in and out of hospitals. Opinions have clashed, but there has been no meeting of minds; the result has been confusion of thought and effectual interference with progress. Under these conditions, one looks forward eagerly to the effort, through the American Conference on Hospital Service, to debate the issue fairly and to develop a program which will come reasonably near to meeting all essential requirements.

Might it not be wise to attempt to bring about the organization of similar mixed committees in each of the states? The appalling lack of unity of mind and purpose in New York alone is surely a striking example of such a need. If the medical, nursing, and representative lay forces of each state could be prevailed upon to combine thought and effort and lay aside personal jealousies and petty differences of opinion, there is nothing in the line of progress and advancement which would not be comparatively easy of accomplishment.

How to secure sufficient funds. I know that many people would say with great emphasis "by special endowments for the training schools." One must say in regard to such a plan that wherever it can be accomplished it is ideal. Unfortunately at the present moment but few schools could secure immediate endowments at all adequate to their needs. Therefore, it would appear that the only logical way in which to meet the increased expense of both hospital and training school is by community or municipal support in the same manner in which our public schools are maintained.

Until very recently hospitals and training schools throughout the country have struggled alone with the responsibility of the education and training of the nurse. It has taken years of education and a great war to awaken us to the fact that the health and welfare of the nation depends largely upon the attitude of the general public concerning medical and nursing education and control. A recent writer on this subject has said "not even our public-school system is of any more importance to the future welfare of the country than is the organized work of Public Health Nursing. From the cradle to the grave our people take no important step in which they do not at once feel the importance of this group. We cannot soberly contemplate the huge health problems of the war and their future readjustments without trembling at the risk we run in not preparing to meet such needs."

The general public today is demanding that training schools shall graduate efficient and properly trained nurses capable of performing their important work in the nursing care and health education of the community. I quote from an editorial which appeared in the *New York Evening Sun*, October 17, 1919: "One of the biggest jobs undertaken by anybody in New York is that of the health nurse. She attempts to teach our citizens 'how to get the best kind of living conditions out of the circumstances that surround them.' Could the wisest men in the world do more?"

Surely it is not unreasonable for us to expect that a community which requires service of so broad and valuable a character from its graduate nurses, be also sufficiently intelligent to realize that progress and development in our schools of nursing can only be assured when adequate financial support is obtained and when schools of nursing are granted the recognition afforded other educational organizations. Then, and not until then, will the training schools be enabled to give a dignified and suitable preparation to the young women of superior intelligence and ability who will only enroll for such work when many of our present obsolete methods are eliminated and when nursing education becomes an actuality and not merely a name.

PROPAGANDA FOR REFORM

VACCINES FOR COMMON COLDS. — There is no scientific evidence that common colds can be prevented by the use of vaccine, despite the glowing recommendations of vaccine makers and the patter of the detail man. Colds characterized by catarrhal inflammation of the mucous membranes of the nose and the throat are caused by various organisms. The organism concerned in one epidemic is different from that in another. It is impossible to anticipate what organism is about to invade the household or community. Inoculation of mixed vaccines fails to produce immunity. (*Jour. A. M. A.*, November 13, 1920, p. 1361.)

"LEPSO"-EPILEPSY CURE. — Like most epilepsy "cures," Lepso was found by the A. M. A. Chemical Laboratory to be essentially a bromid mixture. It was found to contain the equivalent of 51 grains of potassium bromid to the dose. (*Jour. A. M. A.*, November 20, 1920, p. 1443.)

COD LIVER OIL IN RICKETS.—For many years cod-liver oil has been regarded almost as a specific against rickets in children. During recent years it has been made reasonably certain that the administration of cod-liver oil alters the calcium balance in such a manner that calcium will be retained in the body and that it increases the capacity of rachitic children to take up and hold calcium. Since the beneficial effects of cod-liver oil on rickets may be due to its liberal content of vitamine A, frequently described as the Fat-Soluble food accessory, it is interesting to know that crude unrefined cod-liver oil may be 250 times as rich as butter in vitamine A and that samples of refined oil, although not so active as the crude oil, were also far superior to butter in their vitamine potency. The ease with which the Fat-Soluble A Vitamine of cod-liver oil is destroyed by reagents and drastic manipulations make the various "refinements" of cod-liver oil products sold as proprietary preparations even more reprehensible than they have seemed in the past. (*Jour. A. M. A.*, April 9, 1921, p. 1009.)

IODEX, A MISBRANDED IODIN OINTMENT. —(1) Claim: 5 per cent iodin. Finding: iodin content only about 3 per cent. (2) Claim: free iodin. Finding: no free iodin. (3) Claim: absorbed through the skin, iodin can be found in urine 30 minutes after inunction. Finding: the assertion that iodin can be found in the urine after iodex has been rubbed on the skin has been experimentally disproved. The preceding is taken from a poster of the A. M. A. Chemical Laboratory at the A. M. A. New Orleans meeting. (*Jour. A. M. A.*, September 18, 1920, p. 830.)

MORE MISBRANDED VENEREAL NOSTRUMS. —The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, on the ground that the therapeutic claims made for them were false and fraudulent: Injection Malydor (The Williams Mfg. Co., Cleveland, Ohio), essentially a dilute watery solution of boric acid, phenol, a zinc salt, glycerin, acetanilid and unidentified plant material. G Zit (The Stearns Hollinshead Co., Inc., Portland Oregon), bougies consisting essentially of cacao butter and a silver compound. G Zit Antiseptics (The Stearns Hollinshead Co., Portland, Oregon), composed essentially of oils of copaiba and cubebs, and a compound of sulphur. Hinkle Capsules (Hinkle Capsule Co.; Mayfield, Ky.), consisting essentially of powdered cubebs, copaiba and cannabis indica. Tisit-Pearls (S. Pfeiffer Mfg. Co., East St. Louis, Ill.), consisting essentially of a mixture of oil of sandalwood, balsam of copaiba, oil of cinnamon and a fixed oil. Tisit (S. Pfeiffer Mfg. Co., East St. Louis, Ill.), a watery solution of zinc sulphate, thymol, alum and glycerin. Black-Caps (Safety Remedy Co., Canton, Ohio), consisting essentially of copaiba, cubebs and saw palmetto. Hexagon (Montebello Laboratories, Kansas City) an injection consisting essentially of a watery solution of zinc sulphocarbolate, boroglyceride and bismuth subnitrate and capsules containing hexamethylenamin. Hyatt's A. B. Balsam (C. N.

Crittendon Co., New York City), consisting essentially of potassium iodid, alum, Epsom salt, plant extractives and unidentified alkaloids, sugar, glycerin and alcohol. Du-Quoin's Compound Santal Pearls (Wm. R. Warner and Co., Inc., New York City), consisting essentially of a mixture of santal oil and copaiba. (*Jour. A. M. A.*, Oct. 2, 1920, page 954.)

Succus Cineraria Maritima. — The medical profession is at present receiving through the mail circulars extolling this nostrum for its alleged virtue in "absorbing" various forms of cataract. In February, 1917, the Bureau of Chemistry of the U. S. Department of Agriculture issued a Notice of Judgment which showed that the government authorities had prosecuted the firm which markets the preparation—The Walker Pharmacal Company—because claims were made on the trade package to the effect that this nostrum was a remedy for cataract and other opacities of the eye. The authorities charged that these claims were false and fraudulent. To this charge the company pleaded guilty, but these claims are still being made through other avenues to the medical profession. (*Jour. A. M. A.*, Oct. 9, 1920, page 1007.)

The Use of Arsphenamine and Related Compounds.—Many therapeutic perplexities remain after nearly a decade of trial of the type of compound which Ehrlich introduced. It is well for the practitioner to realize this, especially when expert workers still make an appeal for conservative interpretation. Arsphenamine has apparently made it possible or even probable, but only to the inexperienced has the cure of syphilis been made absolute and inevitable. Even the composition of arsphenamine and neoarsphenamine is not fully known, and the control of the products by the government is important. It should be borne in mind also that neoarsphenamine behaves differently in the animal organism from arsphenamine, and should not be regarded simply as arsphenamine in a convenient form for administration. The various brands of arsphenamine and neoarsphenamine made in the United States compare favorably as to toxicity with those made abroad. (*Jour. A. M. A.*, Oct. 9, 1920, page 1005.)

Bran-O-Lax Tablets. — The public is urged to purchase these "Laxative Wheat-Bran Tablets for constipation and indigestion instead of those severe and harmful drugs." The essential claims either inferred or expressed, are to the effect that Bran-O-Lax Tablets are wheat bran in condensed form and that they are free from "harmful drugs." It is also claimed that "Bran-O-Lax contains one heaping tablespoonful of plain nutritious wheat bran condensed into table form." The A. M. A. Chemical Laboratory reports that Bran-O-Lax Tablets contain wheat bran, reducing sugar (probably glucose) in large amounts, a gummy substance, probably acacia, and about one grain of phenolphthalein per tablet. Whereas a heaping tablespoonful of wheat bran was found to weigh about 166 grains, the total weight of a Bran-O-Lax Tablet was only about 35½ grains. (*Jour. A. M. A.*, Oct. 16, 1920, page 1083.)

Toxicity of Arsphenamine.—Roth has determined that if an alkalized solution of arsphenamine or a solution of neoarsphenamine is shaken in the presence of air for one minute, the toxicity is increased. He points out that arsphenamine preparations which are soluble with difficulty are likely to be shaken to aid in the solution of the drug with the risk that chemical reaction may occur. (*Jour. A. M. A.*, Oct. 16, 1920, page 1072.)

Chaulmoogra Oil In Leprosy. — Continued trials made at the leprosy investigation station of the U. S. Public Health Service and the Kalihi Hospital at Hawaii seem to justify more than ever the statement that chaulmoogra oil contains one or more agents that exert a marked therapeutic action in many cases of leprosy. The intramuscular injection of the soluble thyl esters of the fatty acids from chaulmoogra oil usually leads to a rapid improvement in the clinical symptoms of leprosy. The ethyl esters of iodin addition compounds of the unsaturated

fatty acids in chaulmoogra oil have also been used. There is no experimental proof that this addition of iodin causes any increase in the effectiveness of the material used. (*Jour. A. M. A.*, Oct. 16, 1920, page 1071.)

More Misbranded Products. — The following products have been the subject of prosecution by the federal authorities: Salubrin (Salubrin Laboratories, Grand Crossing, Chicago) was held to be misbranded because the therapeutic claims made for it were false and fraudulent. Dolomol Calomel and Dolomol Iodoform (Pulvola Chemical Co., Jersey City, N. J.) were held to be adulterated and misbranded because they did not have the composition claimed. Influenza Special (Senoret; Senoret Chemical Co., St. Louis) was misbranded because the therapeutic claims made for it were false and fraudulent. Gray's Ointment (Dr. W. F. Gray and Co., Nashville, Tenn.) was misbranded because the therapeutic claims were false and fraudulent. Vegetable Blood Purifier (Gibson-Howell Co., Jersey City, N. J.) was held misbranded on the ground that the therapeutic claims were false and fraudulent. Renovine (Van Vleet-Mansfield Drug Co., Memphis, Tenn.) was held to be misbranded because the therapeutic claims were false and fraudulent. Cin-Ko-Na and Iron (De Lacy Chemical Co., St. Louis) was declared misbranded because the curative claims were false and fraudulent. Craig Healing Spring Mineral Water (Craig Healing Springs Hotel, New Castle, Va.) was held to be misbranded because the therapeutic claims were false and fraudulent. Laxa-Cura Water (Laxa-Cura Water Co.) was held to be adulterated and misbranded because it consisted in part of a filthy and decomposed putrid animal and vegetable substance, and because the alleged analysis was incorrect and because the curative claims were false. Reuter's Little Pills for the Liver (Barclay and Co., New York) were held misbranded because the curative claims were false and fraudulent. (*Jour. A. M. A.*, Oct. 23, 1920, page 1150.)

Sukro-Serum and Aphlematol.— About two years ago, American newspapers contained accounts of an alleged cure for pulmonary tuberculosis "discovered" by Prof. Domenico Lo Monaco, of Rome, Italy. Reports indicated that this so-called Italian Sugar Cure for Consumption consisted of the intramuscular injection of solutions of sucrose (saccharose—cane sugar). Now the Council on Pharmacy and Chemistry reports on two proprietary preparations based on the "sugar cure" which are being exploited in this country: Sukro-Serum and Aphlegmatol. Sukro-Serum is marketed by the Anglo-French Drug Company. A circular issued by this company described Sukro-Serum as a "sterilized solution of lacto-gluco-saccharose." By reading this circular to the end, however, one learns that "Sukro-Serum" is not a "serum" in the ordinary sense, but apparently it is a solution of ordinary sugar (sucrose). Aphlegmatol is sold by G. Giambalvo & Co. The circular enclosed with a package of this preparation contains the following, with reference to the composition: "A solution of Hydrate of Carbon after the formula of Professor D. Lo Monaco, Director of the Institute of Physiological Chemistry of the University of Rome. Contents: *Sucrose* ($C_{12}H_{22}O_{11}$) *Glucose and Galactose* ($C_6H_{12}O_6$)." The preparation was found to contain a reducing substance, probably glucose, amounting to about 7.4 per cent. After hydrolysis, 55.5 per cent of glucose was found. The advertising for Aphlegmatol appears to be the work of those ignorant of the English language. These two preparations appear to be nothing more than concentrated solutions of sugar. It is probable that a small amount of cane sugar might be inverted into glucose and fructose, but experiments have shown that cane sugar subcutaneously administered in the small amounts used in this instance is largely excreted in the urine unchanged. Less is known about galactose, but the evidence available would indicate that galactose is largely excreted in the urine unchanged when given subcutaneously. Glucose would

be absorbed as such, and the amounts under consideration, used by the system much the same as when given by mouth. (*Jour. A. M. A.*, August 21, 1920, p. 556.)

IODEX AND LIQUID IODEX.—The A. M. A. Chemical Laboratory examined Iodex in 1915 and found that it contained only traces of free iodin, though claimed to contain "5 per cent therapeutical free iodin." Even the total quantity of iodin was shown to be only about one half of the 5 per cent claimed to be present as free iodin. An analysis of the Iodex sold in 1919 demonstrated that the preparation is essentially the same as that sold in 1915, that is, it was found to contain no free iodin and only about three-fifths of the total amount of iodin claimed. The laboratory points out that the synonym used for Iodex, "Ung. Iodi, M. and J.," is in obvious conflict with the Food and Drugs Act in that, though sold under a name recognized in the U. S. Pharmacopeia, it does not conform to the standards for Ung. Iodi. of the pharmacopeia. The laboratory further reports that Liquid Iodex, sold with the claim that it is a preparation having the properties of free iodin, is a reddish liquid with an odor like oleic acid, containing but little (0.16 per cent) free iodin and only about three-fifths of the total iodin claimed. (Reports of the A. M. A. Chem. Lab., 1919, p. 104.)

CHLORON, CHLORAX AND NUMBER "3."—The Council on Pharmacy and Chemistry has examined Chloron, Chlorax and Number "3," manufactured by the Chlorine Products Company, Inc., New York. The products have been declared inadmissible to New and Nonofficial Remedies. The report of the Council—which in accordance with the usual procedure was submitted to the Chlorine Products Company before its publication was authorized—sums up the Council's findings thus: (1) All are of unreliable composition. (2) The therapeutic claims made for the preparations are not substantiated by evidence and are unwarranted and misleading. Chloron is inferior as an antiseptic to the well-known surgical solution of chlorinated soda because of its low chlorin content and uncontrolled reaction. There is no warrant for the claim that Chlorax is useful in the treatment of "Kidney Conditions," "Diabetes," "Acute Infections," "Blood Dicrasias," "Lithemias and Rheumatism," and "Nervous Conditions," nor is there warrant for the claim that "Number '3'" is a "blood purifier" or a "syphilis remedy." (3) The names of these pharmaceutical mixtures are not descriptive of their composition. (4) All three preparations are irrational. No evidence has been furnished that the lithium salt is of value in the mixtures. It is not rational to combine an active chlorin preparation and a mercury salt in one mixture, nor is there evidence that the addition of opium to the preparations proposed for internal use is of value or rational. Experimentation with Number "3" as a "syphilis remedy" is to be severely condemned in that those on whom it is used will, in the meantime, be deprived of efficient medication. (Reports Council Pharmacy and Chemistry, 1919, p. 70.)

PHYSICIAN'S STOCK IN PRESCRIPTION PRODUCTS.—Is the public getting a square deal when physicians are financially interested in the products that they may be called on to prescribe? Is the average layman's confidence in the medical profession likely to be enhanced when he learns that the physician to whom he went for treatment has a financial interest in the therapeutic agent which was prescribed? It cannot be too often emphasized that it is against public interest and scientific medicine for physicians to be financially interested in the sale of products which they may be called on to prescribe for the sick. It is perfectly true that there are many physicians who would not consciously permit financial considerations to warp their judgment, but it is not humanly possible to remain unbiased in cases of this sort. (*Jour. A. M. A.*, December 11, 1920, p. 1662.)

CHAULMOOGRA OIL. — Chaulmoogra Oil is obtained by expression from the seeds of an East Indian tree, Taraktogenos kurzii. Closely related oils are obtained from

Hydnocarpus wightiana Blume, and H. anthelmintica Pierre. This class differs from other known oils in being composed chiefly of the glycerol esters of two unsaturated fatty acids, named chaulmoogric acid and hydnocarpic acid. In India, chaulmoogra oil has been used both orally and externally in the treatment of leprosy since prehistoric times. Tourtoules used the oil subcutaneously in 1899. V. D. Heiser used the oil in 1914 for the treatment of leprosy by intramuscular injection. Leonard Rogers used orally a mixture of the fatty acids from the oil, which he called gynocardic acid, and later used the sodium salts of these acids subcutaneously (1916), and later on intravenously. Hollman and Dean employed the ethyl esters of the fatty acids from the oil in 1919. (*Jour. A. M. A.*, November 13, 1920, p. 1361.)

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities: Dr. Clifton's Brazilian Herbs (Clifton Drug Co.), sold under therapeutic claims which were false and fraudulent. Her-Vo (Her-Vo Mfg. Co.), sold with therapeutic claims which were false and fraudulent. Acetylo-Salicylic Acid Tablets (James and Annis), containing acetanilid but no acetylsalicylic acid. (*Jour. A. M. A.*, November 13, 1920, p. 1359.)

More Misbranded Nostrums.—The following products have been the subject of prosecution by the federal authorities in charge of the enforcement of the Food and Drugs Act: Stearns' Santolods (Frederick Stearns and Co.), misbranded in that the therapeutic claims were held to be false and fraudulent. Milk's Emulsion (Milk Emulsion Co.), misbranded in that it was falsely claimed to be of benefit in incipient consumption, bronchial asthma, pneumonia, etc. Bliss Native Herbs (Alonzo O. Bliss), misbranded in that the terapeutic claims were held to be false and fraudulent. Madame Dean Antiseptic Vaginal Suppositories (Martin Rudy), misbranded in that the therapeutic claims were held to be false and fraudulent. Halz Tablets (Ed. Price Chemical Co.), mismisbranded in that the curative claims were held to be false and fraudulent. D. D. D. Ordinary and D. D. D. Extra Strong (D. D. D. Co.), misbranded in that the curative claims were held unwarranted. (*Jour A. M. A.*, November 20, 1920, p. 1442.)

Chlorlyptus Not Accepted for N. N. R.—Chlorlyptus (Weeks Chemical Co.) is a chlorinated eucalyptus oil containing 30 per cent of chlorine in relatively stable combination. It is claimed to be a new "chlorinated antiseptic," highly efficient as a wound antiseptic. It is proposed for use in local infections, burns and as an antiseptic in the alimentary and urinary tract. The laboratory investigation made in the A. M. A. Chemical Laboratory and by the referee of the Council on Pharmacy and Chemistry who was in charge of the product showed that Chlorlyptus is a feeble antiseptic, considerably weaker than eucalyptus oil. The chlorin contained in it is bound too firmly to have any action; in fact, the chlorination has merely weakened the eucalyptus oil. The clinical evidence submitted by the manufacturer did not demonstrate the value of Chlorlyptus. The Council on Pharmacy and Chemistry voted not to accept Chlorlyptus for New and Nonofficial Remedies because of the unfavorable results of the laboratory investigations, but with the agreement that the product will receive further consideration if more convincing clinical data become available. (*Jour. A. M. A.*, November 27, 1920, p. 1512.)

Lash's Bitters.—A physician reports that he was called to see a patient who had consumed ninety-one bottles of Lash's Bitters in thirty-six days. Previously the patient had consumed Wine of Pepsin in about the same amount. The amount of Lash's Bitters consumed is equivalent to about twenty ounces of straight whiskey daily. The label on the Lash's Bitters bottle declares "Guaranteed free from habit-forming or injurious drugs." (*Jour. A. M. A.*, April 9, 1921, p. 1029.)

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NOTES FROM THE BOARD OF MEDICAL EXAMINERS.

The Florida Board of Medical Examiners will meet in Tallahassee on October 11th at the Leon Hotel.

At the meeting held in Jacksonville recently forty-three applicants were examined and thirty were issued licenses to practice medicine in Florida.

The Florida Board of Medical Examiners is composed of representatives of the eclectic, homeopathic and allopathic schools of medicine.

Only graduates of recognized schools of medicine of the different cults are permitted to take the examination in Florida, those who graduated prior to 1918 being excepted.

No allowances are made for age or years of practice.

No reciprocal arrangements have been effected.

The Board of Medical Examiners for Florida has full power to revoke licenses to practice in Florida, action of the board being subject to review by the circuit judges of the state.

Dr. J. M. Jackson is president, Dr. W. M. Rowlett is secretary, Dr. William J. Buch is vice-president.

Complete harmony exists and the representatives of the different schools have been able to meet on a basis of complete co-operation. High standards is the watchword. No difficulty will be experienced in securing a prompt hearing on charges of irregularities.

The Board of Medical Examiners invites information and co-operation in correcting any irregular practice in Florida.

It is hoped that the next legislature will see the value of standardization of requirements for practice in Florida and that all practitioners of the healing art in any of its ramifications will be under the control of a single composite Board of Medical Examiners.

Correspondence with the secretary, Dr. W. M. Rowlett, is freely invited.

REVIEWS FROM CURRENT LITERATURE

THE THYROID GLAND AND ITS ACTIVE AGENT, THYROXIN, IN THE TISSUES OF THE BODY

Plummer, Henry S.: "Interrelationship of Function of the Thyroid Gland and of Its Active Agent, Thyroxin, in the Tissues of the Body." Journal A. M. A., Vol. 77, No. 4, p. 243, July 23, 1921.

The essential function of the thyroid is the manufacture of thyroxin. This substance was isolated by Kendall in 1914, and proved to be the active agent of the gland. Thyroxin is active directly or indirectly in the cells throughout the tissues of the body. It hastens the rate of formation of potential energy available on excitation of the cell.

Hyperthyroidism is the physiologic status of an individual when the thyroxin in the tissues is sufficient to hold the basal metabolism above normal. All the phenomena in pure hyperthyroidism are those that must attend a sustained elevation of basal metabolism.

Thyroxin is best administered intravenously. A single dose of thyroxin, sufficient to bring the basal metabolism to normal, brings the physiologic status of thyroidless patients to normal in from ten to twelve days, holds it approximately normal for ten days and returns to the former status in from five to seven weeks.

The amount of thyroxin in the tissues (exclusive of the thyroid) is approximately 14 mg. The average daily exhaustion of thyroxin in the tissues is between 0.50 and 1 mg. A shift of 1 mg. of thyroxin in the tissues of the body is accompanied by a corresponding rise and fall of between 2 and 3 per cent of the basal metabolism. Fourteen milligrams of thyroxin given to a thyroidless person is not fully exhausted until the end of the fifth to eighth week. Two milligrams of thyroxin a day may hold the basal metabolism from 20 to 30 per cent above normal; 3 mg. a day may hold the basal metabolism 50 per cent above normal.

We may assume that the normal stimulation of the thyroid is brought about by a drop in the amount of thyroxin in the tissues of the body. There are approximately 10 mg. of thyroxin in 150 gm. of desiccated thyroid. The physiologic reaction following the administration of thyroxin is identical with that following the administration of fresh or desiccated thyroid gland. Absorption from the intestinal tract is very erratic.

A daily oral dose of 1.6 mg. of thyroxin will hold the basal metabolism of most thyroidless persons within the normal limits. The basal metabolism of a thyroidless individual is from 30 to 40 per cent below the average normal. The edema of myxedema becomes recognizable when the basal metabolism drops from 15 to 17 per cent below normal. In a myxedematous person having a basal metabolism ranging near this point, the edema may appear after stress, and disappear after rest. Sustained stress exhausts the thyroxin more rapidly than it can be produced by the thyroid, and the basal metabolism drops a few points. A recognizable edema may appear and reappear with a shift of 1 mg. or less of thyroxin in the tissues. A drop in the basal metabolism to 40 per cent below normal does not cause edema in the conditions not primarily due to hypothyroidism. This relation of edema to the basal metabolism is of the highest significance in the differential diagnosis of primary hypothyroidism and of the other conditions with which a low metabolism is associated.

Goiter may consist of: (1) hypertrophy of the alveolar epithelium; (2) an increase of the intra-alveolar colloid, and (3) the development of new alveoli. Goiter is therefore classified: (1) hypertrophic; (2) colloid, and (3) adenomatous.

Three clear-cut abnormal physiologic states are associated with anatomic changes in the thyroid: (1) pure hyperthyroidism; (2) pure hypothyroidism, and (3) exophthalmic goiter.

A definite syndrome of hyperthyroidism is, with rare exceptions, associated with diffuse hypertrophic or adenomatous goiter, or follows the administration of thyroxin.

The status of exophthalmic goiter, while in the main hyperthyroid, cannot be attributed wholly to an excess of the normal thyroid product. The characteristics of exophthalmic goiter may be due to an incomplete thyroxin molecule.

The thyroid is subject to the laws of rest and repose. It stores thyroxin, iodin and colloid, and during periods of stress it absorbs a portion of the colloid, utilizes the stored iodin and delivers thyroxin to the blood stream. Hypertrophy is indicative of a relatively high degree of stimulation. Intensive stimulation will cause hypertrophy and hyperfunction.

Iodin favors the disappearance of colloid goiter. Marine has demonstrated that iodin administration prevents the development of diffuse colloid goiter in man. In the diffuse colloid goiter of adolescence, with distended thyroid arteries, bruit and loud thrill and a basal metabolism from 8 to 15 per cent below normal, a remarkable change takes place in from twelve to twenty-four hours following the administration of thyroxin. The bruit and loud thrill disappear and the whole gland rapidly shrinks in size.

Continued use of thyroxin prevents the reappearance of goiter. After absorption of the colloid, in many instances, iodin will prevent its redeposition. The one known factor interfering with the production of thyroxin is a shortage of iodin.

ADENOMATOUS GOITERS.

The colloid goiter usually disappears before the twenty-fifth year, but there is a tendency for a thyroid once overloaded with colloid to retain more than the normal amount. Adenomatous nodules which have their incipiency in the colloid goiter never disappear, although they fluctuate much in size.

The administration of iodin may prevent the formation of colloid goiter. To control adolescent goiter means to control adenomatous goiter also. The adenoma either hyperfunctions or stimulates adjacent thyroid tissue to hyperfunction. Adenomatous tissue seldom causes hyperthyroidism before the latter half of the third decade, but once this tissue has started to function, it does so erratically and without relation to the needs of the individual. After resection of the adenomatous tissue, basal metabolism drops to normal within eighteen days, and there is no tendency to a recurrence of hyperthyroidism.

It is characteristic of hyperthyroidism to come on insidiously over a long period and to run a course of low intensity. It is brought to attention by the phenomena attributable to fatigue and by resulting degenerative changes, rather than by changes indicating a hyperthyroid state.

Infection of the thyroid can stimulate the gland to hyperfunction. The introduction of bacteria into the digestive tract is an important factor, if not the primary cause of endemic goiter.

THE DIPHTHERIA BACILLI AND DIPHTHEROIDS OF THE ADENOIDS AND TONSILS

Pilot, Isadore: "The Diphtheria Bacilli and Diphtheroids of the Adenoids and Tonsils." Journal of Infectious Diseases, Vol. 29, No. 1, p. 62, 1921.

The article begins with "The tonsils are the foci that usually harbor diphtheria bacilli in carriers, and their removal frequently terminates the carrier state."

After a review of the literature on the subject the observation is made that in the previous work practically no attention has been paid to the adenoids.

The paper is based on the findings from material from 100 children who had tonsils and adenoids removed chiefly because of hyperplasia. All were afebrile and had no evidence of acute inflammation of the throat or respiratory passages. "A reliable history of diphtheria was not to be obtained in any case."

The adenoids and tonsils showed no pathological change other than hyperplasia.

Diphtheria bacilli were recovered in twelve instances from the adenoids and from one or both tonsils. In no instance were they recovered from one or both tonsils and not from the adenoids.

Diphtheroids were more frequently found and these were more often recovered from the adenoids.

Of the twelve strains two were highly virulent, one gave a low virulence and three produced local abscesses, hemorrhages in mucous membrane and muscles, the other six were avirulent.

SYPHILIS

Guy, W. H.: "A Valuable Method of Treatment in Selected Cases of Syphilis." The American Journal of Syphilis, Vol. V, No. 3, p. 496, July, 1921.

Guy gives a very intensive technique for the treatment of early syphilis, modification slightly to that of Pollitzer and others for arsphenamine administration in the beginning of a syphilitic infection. The author recommends the intravenous dose of arsphenamine to be calculated at the rate of .1 gm. to each 30 pounds of weight of the patient, *i. e.*, a .5 gm. dose for a 150-pound patient. The injections to be repeated on three successive days, and followed in three days by an intramural injection of 1 gr. of salicylate of mercury, and the mercury injections to be repeated weekly for three doses. All of the above to be repeated in the two following months. In other words, Guy recommends a complete saturation with both arsphenamine and mercury to the point of tolerance for three months.

SYPHILIS

Hazen, H. H.: "The Diagnosis of Syphilis." The American Journal of Syphilis, Vol. V, No. 3, p. 472, July, 1921.

In this article, Hazen gives twenty-five valuable procedures that should be considered in making a correct diagnosis of syphilis. In the first part of the article Hazen has the following important considerations:

"One rule which the author attempts to impress upon his students is the following: Be quick to suspect syphilis; be slow to diagnose syphilis. For the past ten years there has been entirely too great a tendency upon the part of the medical profession at large to make this diagnosis upon insufficient evidence. Each week patients are seen who have been told that they must have a course in arsphenamine, some times for pityriasis rosea, sometimes for some minor skin affection (only the day that this was written a patient with ringworm narrowly escaped antisyphilitic treatment), and sometimes upon the rather scanty evidence of a single weak Wassermann reaction.

"Entirely too much stress has been placed upon the Wassermann by the average practitioner; the old kodak advertisement has been replaced in medicine by 'The Wassermann will make the diagnosis, 606 will do the rest.' Now, as a matter of fact, the diagnosis of this disease is often an extremely difficult one, and there are at least twenty-five different procedures which may be helpful in establishing a correct diagnosis. Of these procedures there are very few which, taken singly, will absolutely establish a diagnosis. These will be dealt with later. There exists at present no comprehensive outline for the diagnosis of syphilis. Stokes has published a brief schedule, extremely valuable and suggestive, but it has not yet been developed in print."

FECAL FLORA OF INFANTS AND CHILDREN

Davison, Wilburt C., and Rosenthal, L. V.: "A Bacteriological Study of the Fecal Flora of Infants and Children." American Journal, Diseases of Children, September, 1921.

The authors studied the fecal flora of seventy-five infants, sixty-one of the children being in normal health and fourteen suffering from intestinal disturbance.

The conclusion reached was that there is a lack of etiologic association of nutritional diseases with a putrefactive intestinal flora. This flora is found in the stools of normal children and calls for no change of diet.

The aerobic spore bearers, the anaerobic spore bearers and particularly the gas bacillus, B. welchii, were shown to have no etiologic relationship to intestinal disturbances in spite of many statements to the contrary. B. proteus and B. pyocyaneus in like manner have been acquitted.

All organisms capable of producing the putrefactive stool have been reported as existing in the excreta of normal children. On the other hand, the Flexner and Shiga bicilli are directly responsible for infectious dysentery.

The putrefactive flora is increased in the stools of children suffering from dysentery, but this increase is a result rather than a cause of the disturbance. The influence of diet on the incidence of putrefactive flora is not striking.

COELIAC DISEASE

Cantley, Edmund: "Coeliac Disease." Archives Pedeatrics, March, 1921.

The author in an entirely academic manner describes a symptom complex denominated by English authors as "Coeliac Disease."

It occurs mostly in children from two to five years of age and is more frequent in females than males. It is chiefly characterized by persistent looseness of the bowels, not watery in character but of the consistence of oatmeal gruel. The stools are light in color, probably due to acholia, foul in odor, frothy and of striking abundance. The child is pale, apathetic and emaciated, though the face may remain plump and the belly large. There is marked retardation in growth, weakness and general debility. It is an affection essentially chronic and runs a course of months or even years. No immediate or predisposing cause has been determined, but the symptom-complex seems to be deficiency of biliary secretions and a marked inability to digest and absorb fats. No constant pathology attends the affection. Medical treatment is unsatisfactory and symptomatic, and the dietetic management seems to be mostly in the avoidance of fats, and especially of cream.

On the whole "Coeliac Disease" seems to present few if any phases not exhibited by the average case of fat indigestion of childhood.

GREAT INTEREST SHOWN IN SOUTHERN MEDICAL ASSOCIATION SPECIAL TRAIN FROM ATLANTA.

Numerous inquiries are being received by Dr. Allen H. Bunce, Secretary Medical Association of Georgia, and Mr. Pat B. Hampton, D. P. A., Seaboard Air Line Railway, regarding the special train which will be operated by the Medical Association of Georgia, to Hot Springs, Ark., account the meeting there November 14th to 17th, as announced in previous issue of this Journal. This train, which will consist of all-steel Pullman drawing room sleeping cars, compartment cars and dining car, will leave Atlanta via the Seaboard Air Line Railway at 5:30 p. m., Saturday, November 12th, going via Birmingham, Frisco Railroad to Memphis, thence Rock Island Railroad to Hot Springs, arriving there Sunday afternoon, November 13th.

SPECIAL REDUCED RAILROAD RATES.

The railroads have named a rate of one-and-one-half fare for the round trip, for our meeting, tickets to be sold November 10th to 16th, inclusive, with return limit of November 21st. In order to secure this rate, you must have identification certificate to present to ticket agent. You can secure these certificates from your local secretary, or from the Southern Medical Association office at Birmingham. Be sure to apply for your certificate early, so as to avoid confusion at the last minute.

As previously stated, all the physicians of the Southeastern States, together with their families, who anticipate attending this meeting, are cordially invited by the Medical Association of Georgia to join them on their special train. Requests for information or Pullman reservations should be addressed to Mr. Pat B. Hampton, District Passenger Agent, Seaboard Air Line Railway, Atlanta, Ga., or Dr. Allen H. Bunce, Secretary Medical Association of Georgia, Healy Building, Atlanta, Ga.

PUBLISHER'S NOTES

THE MODERN METHOD OF FEEDING INFANTS.

Modern infant feeding calls for a formula suited to the individual requirements of the individual baby. The physician now realizes that an infant deprived of breast milk must be fed as an individual. The nourishment from the infant's food is principally derived

from cow's milk. The "foods" contain no mysterious life-giving elements, but are used as modifiers. As such they are indispensable for their carboyhydrate content, the added carbohydrate being necessary to make up for the loss of carbohydrate when cow's milk is diluted with water. It is also important that these "foods" are given as carbohydrates and should not contain a mixture of vegetable protein and fat, since the cow's milk supplies animal protein and fat in proportion suitable for the growth of most babies.

Infant feeding should be directly under the control of the physician. Realizing this important fact, Mead Johnson & Company, of Evansville, Indiana, have manufactured a line of infant diet materials suitable for the individual requirements of the individual baby. These products do not carry laity directions on the trade packages. Such directions on a package of food is the unsurmountable wall that differentiates between individual infant feeding and indiscriminate infant feeding. The physician may prescribe Mead's products with perfect confidence.

Mead's line of infant diet materials consists of Mead's dextri-maltose (dextrins and maltose), barley flour, dry malt soup stock, casec (calcium caseinate, for preparing protein milk), arrowroot flour and cerena, all of which are supplied without any directions on the packages. Over and beyond the gratifying results obtained from Mead's products, the physician is given unlimited scope to his own creative talents, hence there will be a greater number of better babies in his immediate neighborhood. The mother who uses Mead's Diet Materials at the direction of her physician is disposed to place credit for the welfare of her baby where credit belongs, i. e., to the doctor. The Mead Johnson policy means the realization of an ethical ideal.

Interesting publications on infant feeding, prepared by Mead Johnson Company, are well worth writing for. Letters addressed to them will receive personal attention from their scientific department.

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many various forms of Benzyl esters and imitations of the original product have appeared. The claims for these preparations are as varied as their number and to some extent at least have served to confuse the medical profession as to the value of Benzyl therapy. For complete information as to the proper use of Benzyl preparations and a list of their indications, write

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